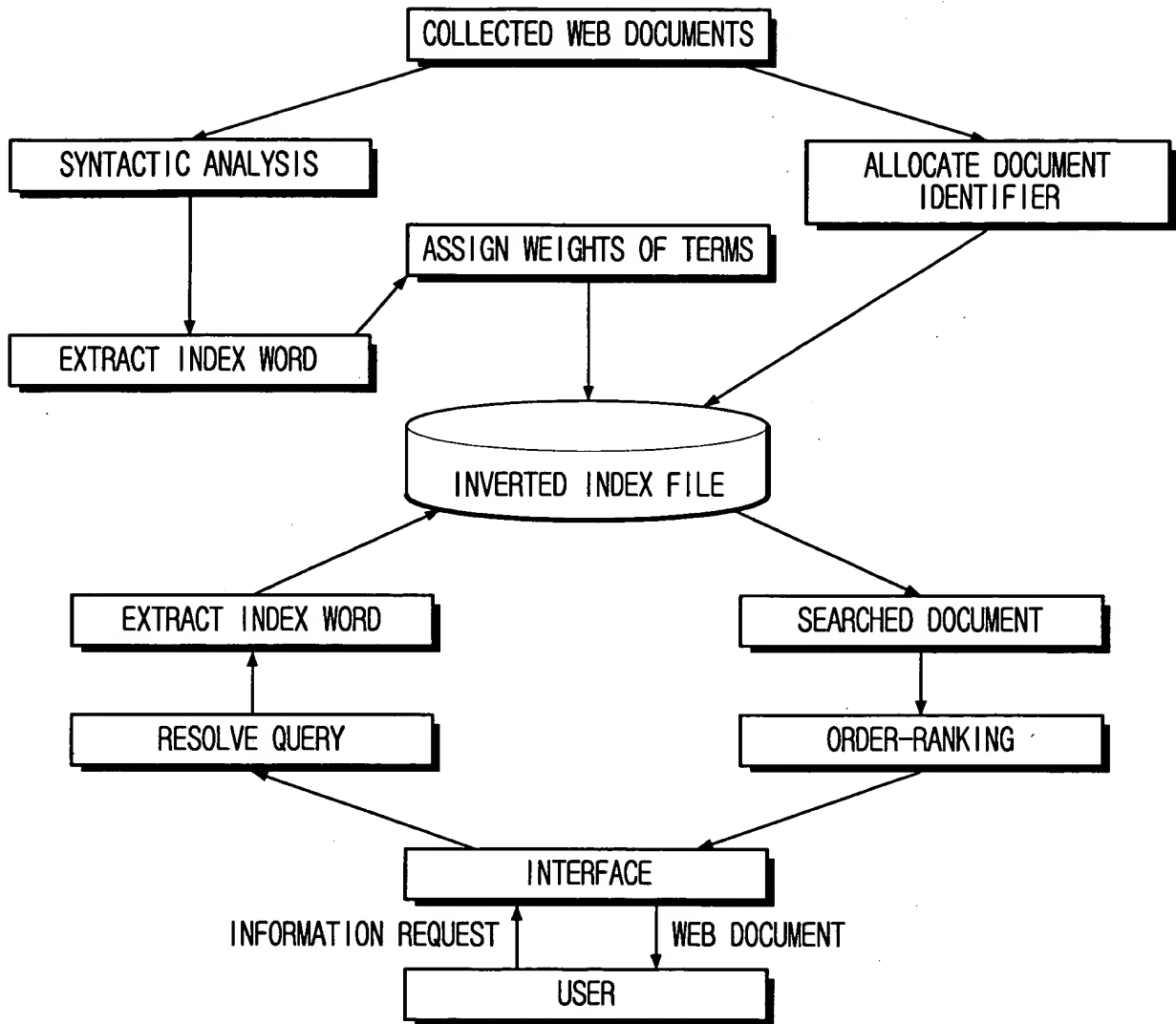


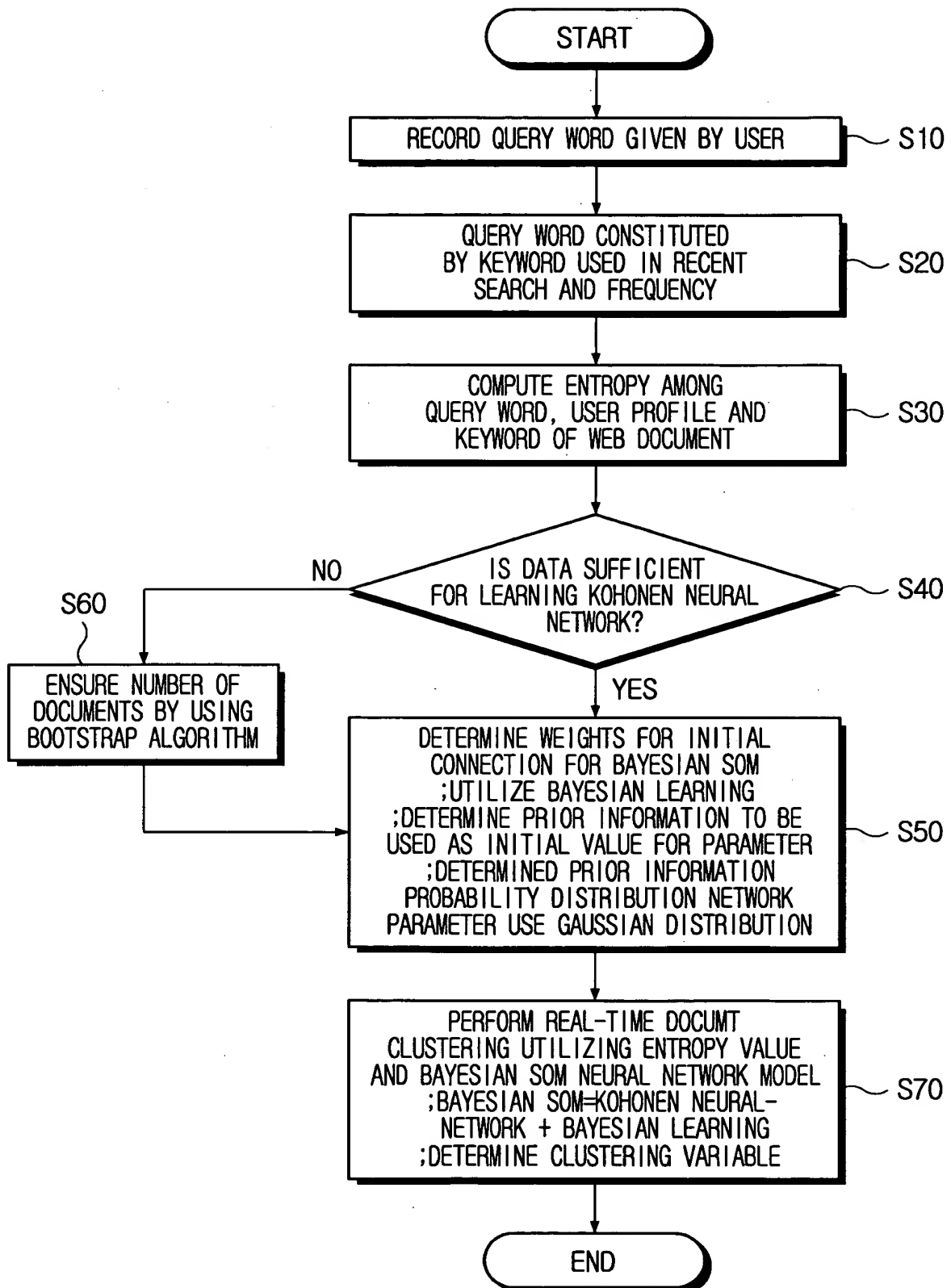
FIG. 1



- Prior Art -

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FIG. 2



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FIG. 3

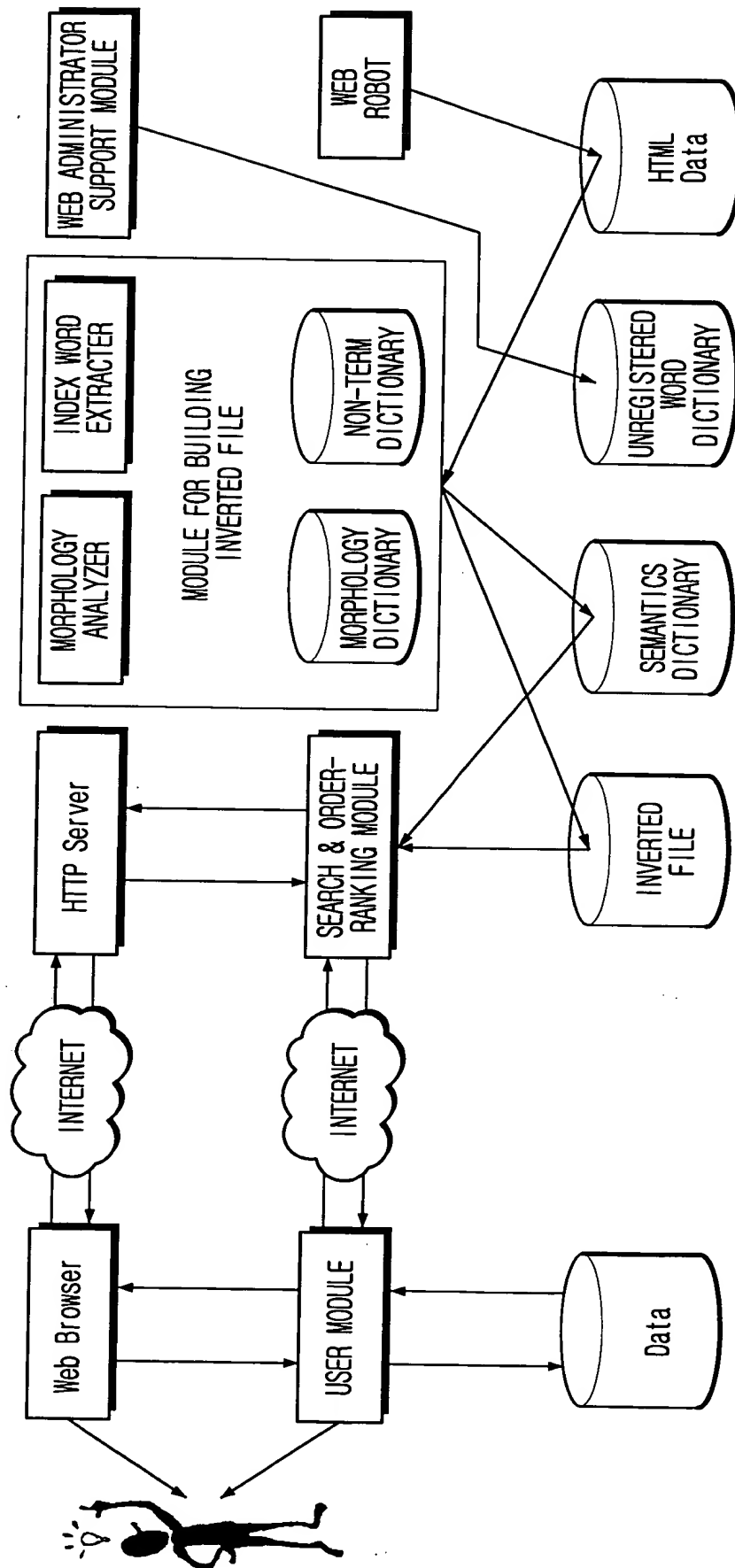
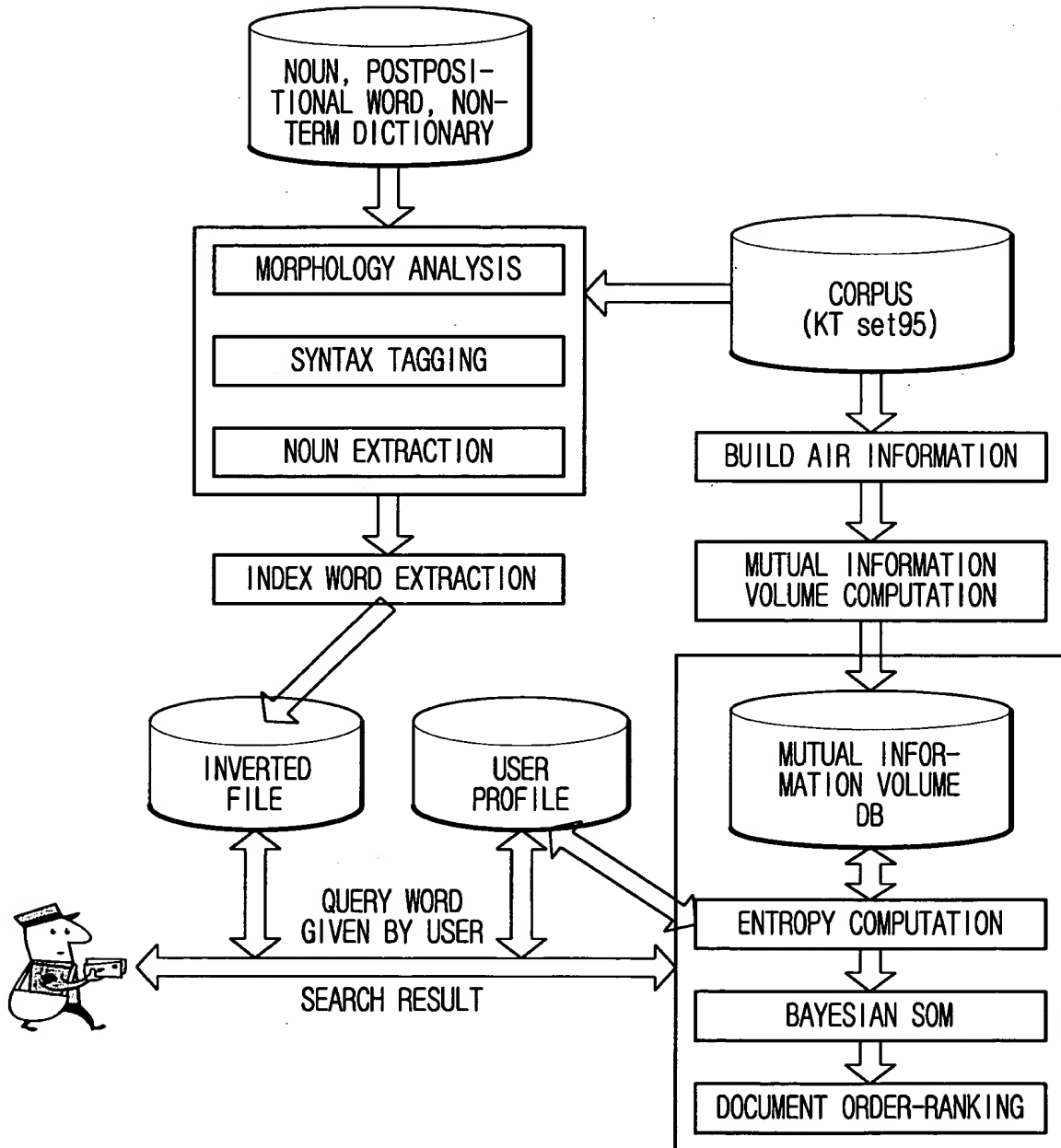


FIG. 4



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FIG. 5A

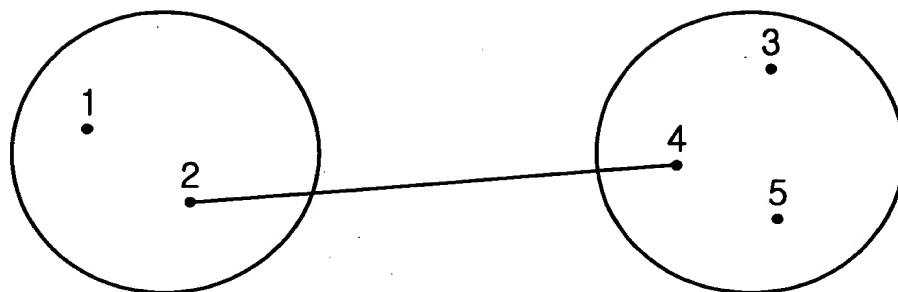


FIG. 5B

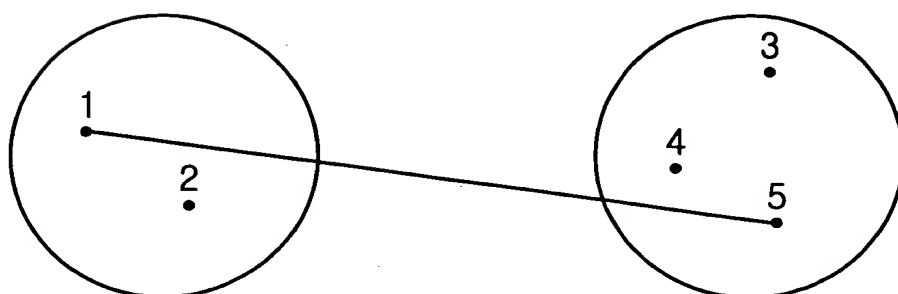


FIG. 5C

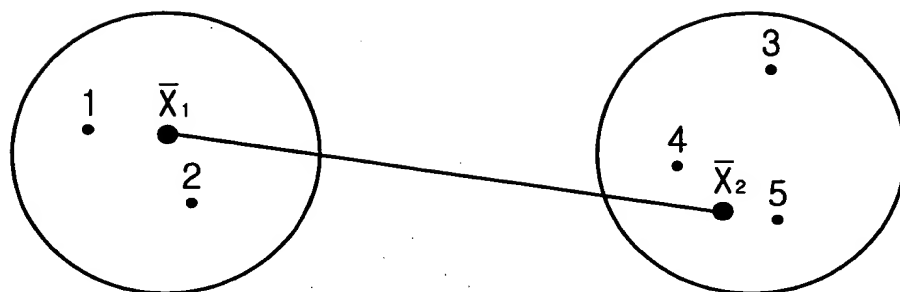


FIG. 5D

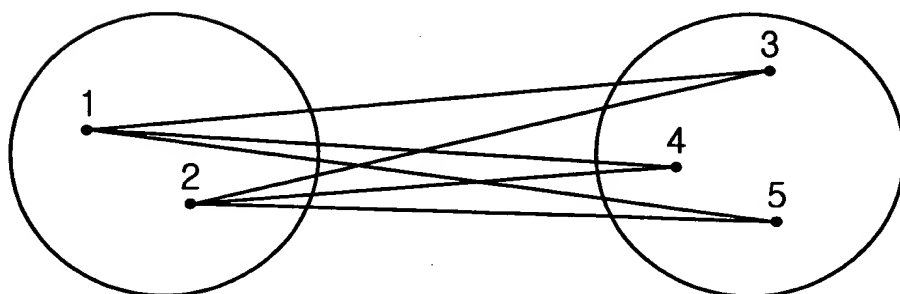
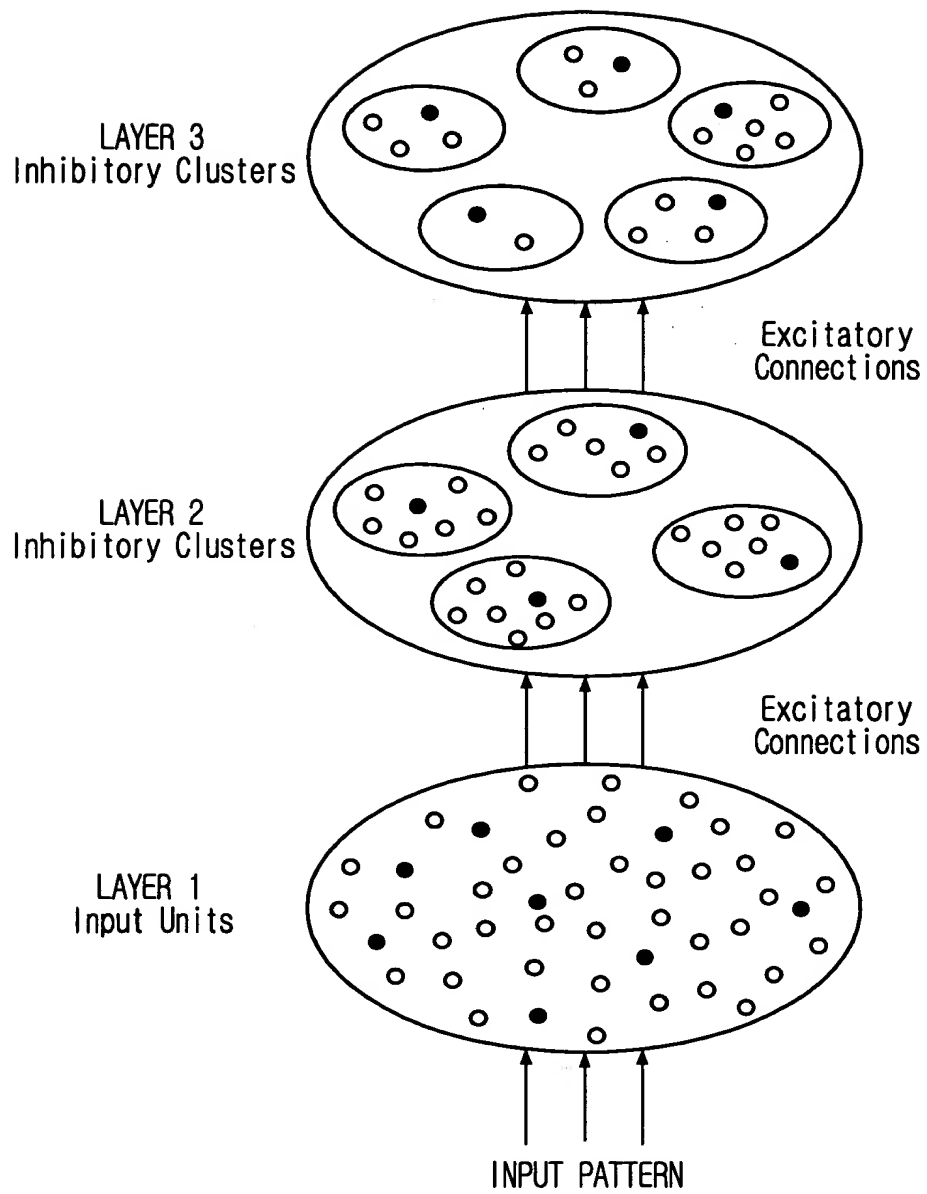


FIG. 7



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FIG. 8

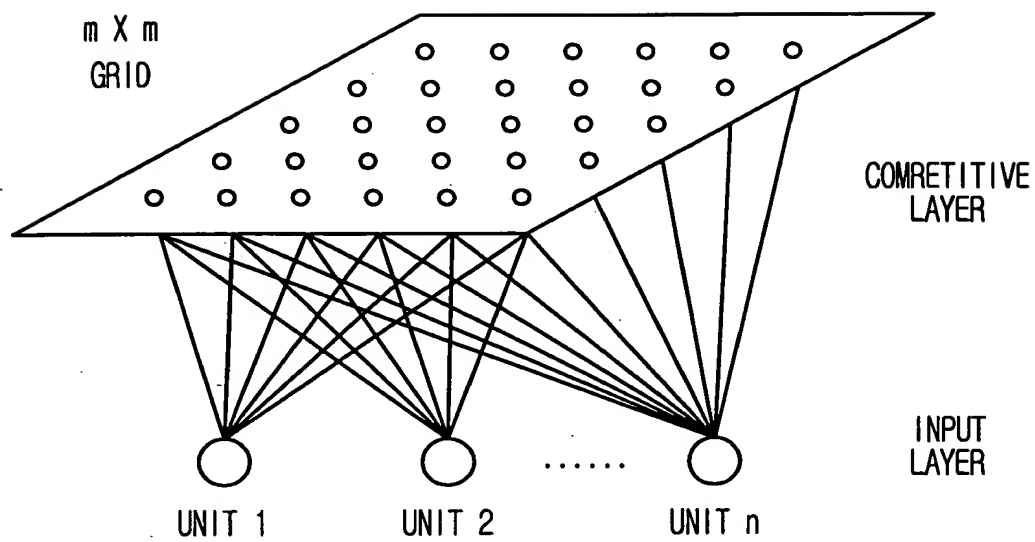


FIG. 9A

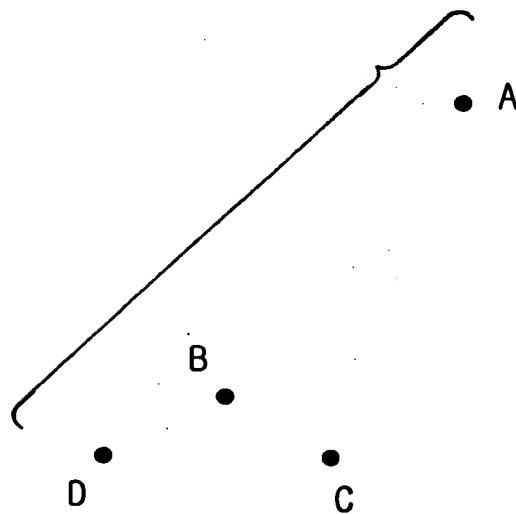


FIG. 9B

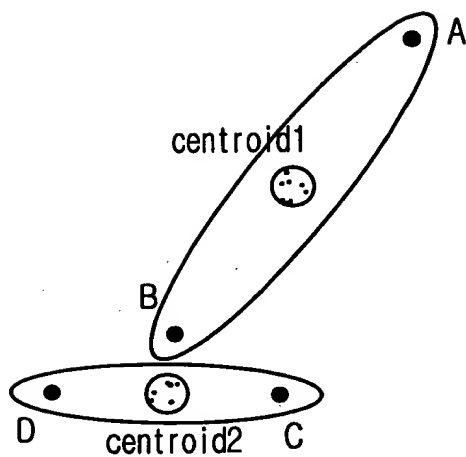
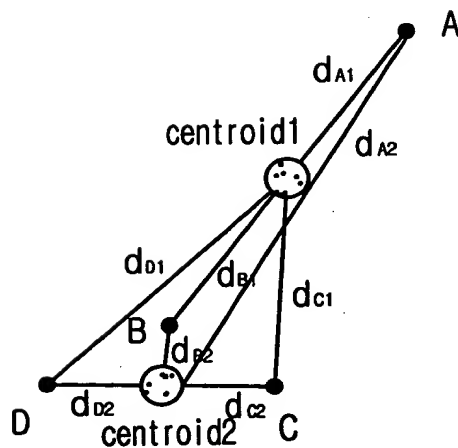


FIG. 9C



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FIG. 9D

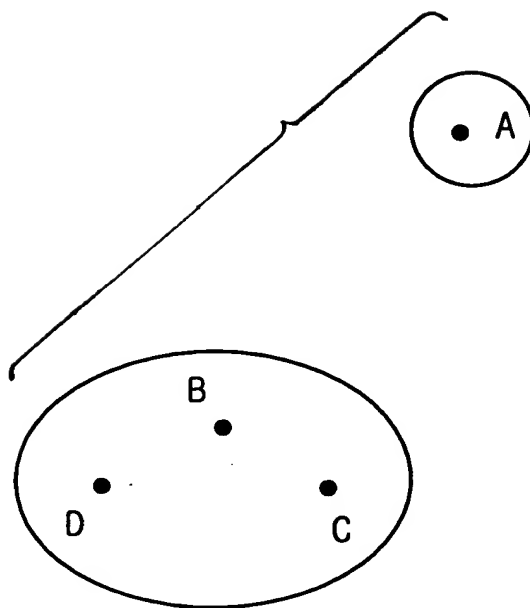


FIG. 10

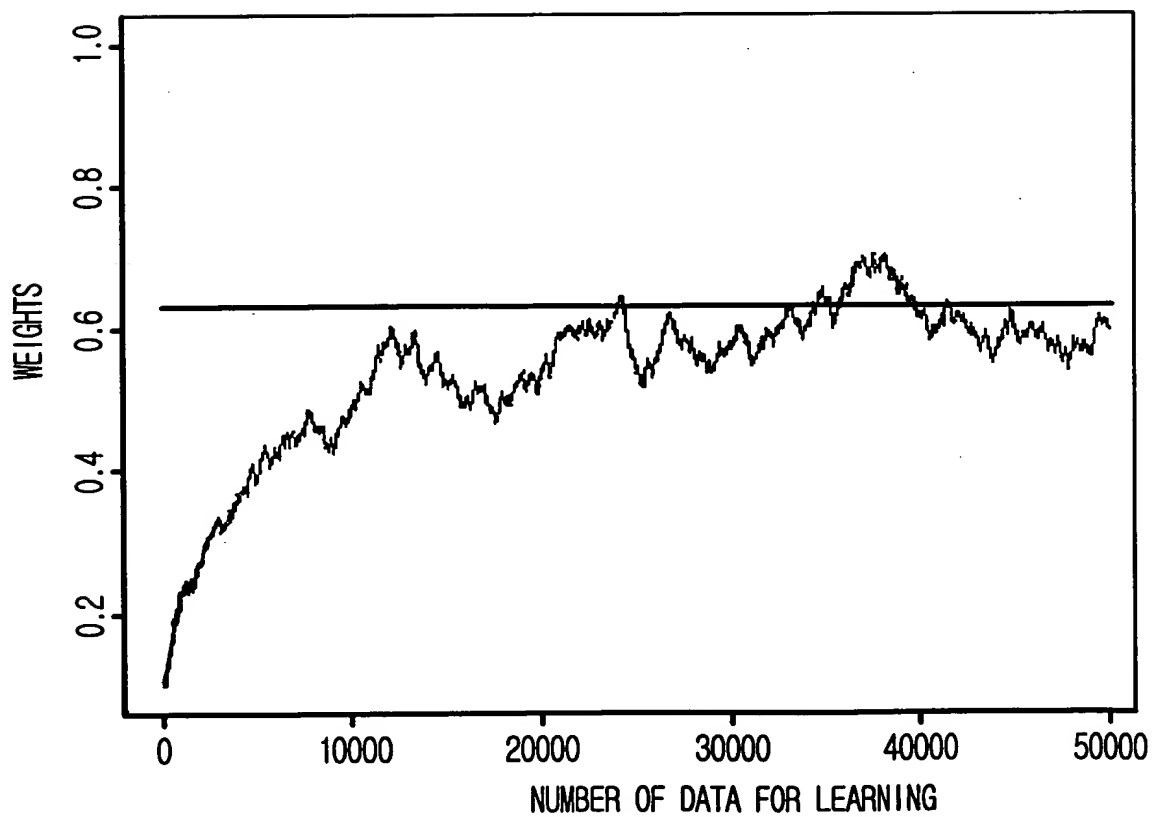


FIG. 11

```

Algorithm RankofCluster(Ret_Docs[N])
// DOCUMENT CLUSTER BY BAYESIAN SOM AND ORDER-RANKING ALGORITHM
set i, j, k to 0;
for i = 1 to k;
    for j = 1 to 3;
        Index_Vector[k][j] = ExtrOfIndex(Ret_Docs[k]);
        Call MutualInformation(User_Q[NumofQuery], Index_Vector[k][j]);
        DocEntropyVector[i][j] = CalculateEntropy(Ret_Docs[k]);
    end j;
endi;
if NumofData <= 30 Call BootStrap(DocEntropyVector[i][j]);
// PRODUCE SUFFICIENT DATA COLLECTION REQUIRED FOR LEARNING BAYESIAN
// BAYESIAN NEURAL NETWORK BY EMPLOYING STATISTICAL BOOTSTRAP ALGORITHM
// ALGORITHM IF DATA FOR LEARNING IS SMALL(FOR EXAMPLE, LESS THAN 30)
DecisionOfInitialWeight();
// DETERMINE INITIAL WEIGHTS FOR KOHONEN NETWORK BY UTILIZING PRIOR
// DISTRIBUTION OF BAYESIAN. THAT IS, AVERAGE IS ZERO, AND INERSE NUMBER
// OF SQUARE ROOT OF NUMBER OF NODES OF KOHONEN LAYER IS UTILIZED
// AS STANDARD DEVIATION
Call BayesianSOM();
for i = 1 to NumOfCluster;
    CalculationOfNorm(Cluster[NumOfCluster]);
end i;
RankOfCluster(Value_of_Norm[NumOfCluster]);
// RE-RANK DOCUMENT CLUSTER HAVING HIGH SIMILARITY TO QUERY WORD
// GIVEN BY USER
End Rank_of_Cluster

```

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